

SPECIFICATION

Applicant requests the examiner remove the sentences found at page 15, paragraph 2, lines 2-4 and substitute with the following.

In figures 6A the corn plants are further centered into the ear separation chamber 140 by improved stripper plates 130. In figure 6A enlarged gathering chain paddles 110 have an increased angle relative to the gathering chain 120 which makes them more aggressive when gathering down corn plants. Figure 8 shows an end view of figure 6 incorporating the invention and components of pending patent application serial # 09/827563 in relation to the ear separation chamber 140 and end row unit cover 150A, adjustable wing divider 152 and telescoping tube divider 153 as previously claimed and disclosed in pending patent application #10,376,657.

Applicant submits a revised Figure 6A and Figure 8 with elements 130 and 140 added, respectively.

Examiner has also objected to applicant's lack of precedence for the term "hardened material" found in the claims. Applicant addresses this objection by requesting the examiner add the following at the end of paragraph 2 on page 16 of applicant's application:

The stalk roll flute edge may be hardened for improved wear resistance and self-sharpening qualities by adding any hardened material well known to those in the art, such as a tungsten carbide weld, along the trailing edge of the stalk roll flute.

In response to paragraphs 2 and 3 of the examiner's office action, applicant requests the examiner amend the patent application as outlined above.

CLAIM OBJECTIONS

Applicant agrees with Examiner's claim objections as in discussed in paragraph 4 of the examiner's office action and applicant has edited the claims to replace "compromising" with comprising. Modified claims are included herein.

CLAIM REJECTIONS

Applicant argues that the examiner has mischaracterized several of the references cited in prosecution of this patent application. The purpose of the invention described herein is to improve the processing of field corn. During processing of field corn (also referred to as feed corn) as found in the applicant's invention, the objective is to strip the ear of corn off the corn stalk without severing the corn stalks. Neither of the references discussed below and cited by the examiner pertain to the function of applicant's invention so neither reference is applicable to prosecution, as explained herein.

U.S. Patent 3,707,833

The Sutton reference (U.S. Patent 3,707,833) as cited by the examiner teaches separating ears of sweet corn from the stalk to minimize damage to the ears. Sutton substantially accomplishes this objective through the combination of knife edge stalk rolls for severing the corn stalk with a large, curved stripper mounted above the stalk rolls. Figures 2-4 as shown in the Sutton reference, however, are technically incorrect. The corn stalk does not end at the ear of corn. As shown in Sutton, as the ear of corn is processed, the ear of corn will be severed from the bottom portion of the corn stalk. The corn stalk will be then severed from itself. The top portion of the corn stalk will still be attached to the ear of corn so that both the top portion of the corn stalk and the ear of corn will continue through the sweet corn picker, thus preserving and protecting the sweet corn ear. See applicant's Figures 17 and 17A by comparison. As applied to field corn and taught by applicant, producing a large amount of material other than ears (MOTE) reduces processing efficiency. Severing the stalk from itself further reduces the processing efficiency and can increase soil conservation issues. Additionally as shown

the stalk roll cutting edge (48) angle is opposite that taught by applicant. Cf. Figures 13B-B, 14B-B, 15B-B and 17B-B.

U.S. Patent #5,309,702

The Lundahl reference (U.S. Patent #5,309,702) discloses an application to apply teeth to an auger cutter for use with a crop processor. The purpose and function of a crop processor is better referenced in previous patents issued to Lundahl. As found in U.S. Patent 5,005,342 issued to Lundahl in 1991, a crop processor, with an auger cutter, windrower and conditioner is for standing crops such as hay and includes a cutter and a feed mechanism for feeding forage harvesters crops such as corn and sorghum, including a cutter auger with cutting teeth attached to the auger flight and a conveyor auger to move the cut crop to a central area to be discharged as a window or as a mass of material to be fed to a second crop processing device such as a forage harvester.

Forage harvesting of corn has as its purpose the production and comminution of leaves, stems, stalks and ears of corn into forage for animal feed. Harvesting corn as described by the applicant is for the purpose of shelling, or separating, ears of corn from stalks for the purpose of further separating the kernels of corn from the corn ears. As described in applicant's patent application, a stalk roll that penetrates and lacerates the corn stalk during processing of the corn, but does not sever the corn stalk from itself, improves processing. Applicant again argues that stalk severance prior to ear separation only increases intake of material other than ears (MOTE) to the combine thereby increasing horsepower and fuel requirements. This stall may also cause ear separation to take place near the opening of the row unit and allow loose ears to tumble to the ground thereby becoming irretrievable. (See also U.S. Patent Application #10/376,657 filed by applicant.)

The Sutton and Lundahl references are not pertinent prior art that teach or suggest applicant's invention. Those practiced in the arts would not look to combine the

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teachings of the above mentioned references to reduce severance of corn stalks to improve the processing of field corn.

U.S. Patent #3,304,702

The Russell reference (U.S. Patent #3,304,702) discloses prior art from a tractor mounted ear corn picker that precedes modern combine harvesting technology as taught by the applicant by over forty (40) years. Russell teaches an arrangement of opposing tubes 72 with a plurality of evenly spaced elongated angle cutter bars 76 and cutting edges 78. Russell also teaches "[a] plurality of elongated, equally spaced pressure resisting bars 80 are secured to the tubes 72 and 74 and are disposed between the angle bars 76." See Russell Col. 2, lines 35-53. As taught by Russell for a set of stalk roll flute or knife edges to be operable, a pressure resisting bar 80 is required to oppose the stalk roll flute or knife edge. Applicant's invention does not require, disclose or claim a "pressure resisting bar" element as a limitation. Applicant's omission of an element, "pressure resisting bars", with retention of the element's function, cutting or lacerating the stalk, is an indicia of unobviousness. See In re Edge, 359 F. 2d 896 (MPEP 2144.04 §B).

REMARKS

Applicant believes he has fully responded to the examiners arguments and rejections with regard to the present patent application. Applicant requests the examiner consider the enclosed response and reconsider allowing the patent application. Should the examiner not allow the claims as resubmitted, applicant requests a telephonic conference at the convenience of the examiner to discuss the teachings, references and claims.

Respectfully submitted,

MARION CALMER,

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By



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